## **ENVIRONMENTAL CHEMISTS**

Date of Report: 12/05/97 Date Received: 11/20/97 Project: PO# M59166

Date Samples Extracted: 11/26/97 Date Extracts Analyzed: 11/26/97

## RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC **USING METHOD 6010**

# Samples Processed Using Method 3005A Results Reported as mg/L (ppm)

Sample ID	<u>Chromium</u>	Copper	<u>Nickel</u>	<u>Zinc</u>
M59166	0.55	0.57	0.53	0.07
Method Blank	<0.05	< 0.05	< 0.05	< 0.05

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Date of Report: 12/05/97 Date Received: 11/20/97 Project: PO# M59166

## QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 711079-01 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relati Perce Differe	nt	Acceptance Criteria
Chromium	mg/L (ppm)	0.55	0.61	10		0-20
Copper	mg/L (ppm)	0.57	0.62	8		0-20
Nickel	mg/L (ppm)	0.53	0.56	6		0-20
Zinc	mg/L (ppm)	0.07	0.07	0		0-20

Laboratory Code: 711079-01 (Matrix Spike)

		Reporting	Spike	Sample	% I	Recovery	Acceptance	Relative Percent
Aı	nalyte:	Units	Level	Result	MS	MSD	Criteria	<b>Difference</b>
Cl	romium	mg/L (ppm)	5	0.55	90	89	80-120	1
Co	pper	mg/L (ppm)	5	0.57	91	90	80-120	1
N	ickel	mg/L (ppm)	10	0.53	88	88	80-120	0
Zi	nc	mg/L (ppm)	5	0.07	90	89	80-120	1

Laboratory Code: Laboratory Control Sample

	Reporting	Spike	% I	Recovery	Acceptance	Relative Percent
Analyte:	Units	Level	LCS	LCSD	Criteria	Difference
Chromium	mg/L (ppm)	5	92	93	80-120	1
Copper	mg/L (ppm)	5	94	96	80-120	2
Nickel	mg/L (ppm)	10	90	92	80-120	2
Zinc	mg/L (ppm)	5	89	92	80-120	3

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

# PJ#711079

(25 A) 11.20.97 11A

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### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

December 5, 1997

### DUPLICATE COPY

#### **INVOICE #97ACU1205-2**

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project PO# M59166: Results of testing requested by Gerry Thompson for material submitted on November 20, 1997.

FEDERAL TAX ID #(b) (6)

#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

December 5, 1997

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on November 20, 1997 from your PO# M59166 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Charlese ferman for

Kurt Johnson

Chemist

Enclosures ACU1205R.DOC